Listing of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): An isolated protein complex having a first protein ~~which is~~ interacting with a second protein, said first protein being selected from the group consisting of:

(a) Tsg101,

(b) a Tsg101 fragment capable of interacting with HIV GAGp6 late domain, [[and]]

(c) a homologue of Tsg101 capable of interacting with HIV GAGp6 late domain and having an amino acid sequence that is at least about 50% identical to Tsg101, [[or]] and

(d) a homologue of said Tsg101 fragment [[,]]capable of interacting with HIV GAGp6 late domain and having an amino acid sequence that is at least about 50% identical to ~~that of Tsg101 or~~ said Tsg101 fragment;

and said ~~interacting with a~~ second protein ~~which is~~ being selected from the group consisting of:

(i) HIV GAG ~~polypeptide~~,

(ii) ~~a HIV GAG polypeptide~~ an HIV GAG fragment containing an HIV GAGp6 late domain motif and capable of interacting with Tsg101, [[and]]

(iii) a homologue of HIV GAG ~~polypeptide~~ that is capable of interacting with Tsg101, has an amino acid sequence that is at least about 50% identical to that of HIV GAG and contains an HIV GAGp6 late domain motif, [[or]] and

(iv) a homologue of said HIV GAG ~~polypeptide~~ fragment [[,]] that is capable of interacting with Tsg101, has ~~having~~ an amino acid sequence that is at least about 50% identical to that of ~~HIV GAG polypeptide or~~ said HIV GAG ~~polypeptide~~ fragment, and contains an HIV GAGp6 late domain motif.

Claim 2 (currently amended): The isolated protein complex of Claim 1, wherein said second protein is HIV GAGp6 or a fragment thereof that contains an HIV GAGp6 late domain and is capable of interacting with Tsg101.

Claim 3 (currently amended): The isolated protein complex of Claim 1, wherein said first protein is a fusion protein containing (a) Tsg101 or (b) said Tsg101 fragment or (c) said homologue of Tsg101 or (d) said homologue of said Tsg101 fragment.

Claim 4 (currently amended): The isolated protein complex of Claim 1, wherein said second protein is a fusion protein containing (a) HIV GAG ~~polypeptide~~ or (b) said HIV GAG ~~polypeptide~~ fragment or (c) said homologue of HIV GAG ~~polypeptide~~ or (d) said homologue of said HIV GAG ~~polypeptide~~ fragment.

Claim 5 (currently amended): An isolated protein complex having a first protein which is Tsg101 or a Tsg101 fragment capable of interacting with HIV GAGp6 late domain, or a homologue thereof capable of interacting with HIV GAGp6 late domain and having an amino acid sequence that is at least 50% identical to that of Tsg101 or said Tsg101 fragment, interacting with a second protein which is HIV GAGp6 ~~polypeptide~~ or ~~a HIV GAGp6 fragment~~ an HIV GAGp6 fragment containing an HIV GAGp6 late domain and capable of interacting with Tsg101, or a homologue thereof that contains an HIV GAGp6 late domain motif, is capable of interacting with Tsg101 and has ~~having~~ an amino acid sequence that is at least 50% identical to that of HIV GAGp6 ~~polypeptide~~ or said HIV GAGp6 ~~polypeptide~~ fragment.

Claim 6 (currently amended): The isolated protein complex of Claim 5, wherein said first protein is a fusion protein containing (a) Tsg101 or (b) said Tsg101 fragment or (c) said homologue of Tsg101 or said Tsg101 fragment.

Claim 7 (currently amended): The isolated protein complex of Claim 5, wherein said second protein is a fusion protein containing (a) HIV GAGp6 ~~polypeptide~~ or (b) said HIV GAGp6 fragment or (c) said homologue of HIV GAGp6 or said HIV GAGp6 fragment.

Claim 8 (currently amended): An isolated protein complex comprising:

(a) a first protein which is selected from the group consisting of

(i) Tsg101 protein,

(ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6 late domain,

(iii) a Tsg101 protein fragment containing the Tsg101 UEV domain and capable of interacting with HIV GAGp6 late domain, and

(iv) a fusion protein containing said Tsg101 protein, said Tsg101 protein homologue or said Tsg101 protein fragment; and

(b) a second protein selected from the group consisting of

(1) HIV GAG ~~polypeptide~~,

(2) ~~a HIV GAG~~ an HIV GAG ~~polypeptide~~ fragment containing an HIV GAGp6 late domain motif and capable of interacting with Tsg101,

(3) ~~a HIV GAG~~ an HIV GAG ~~polypeptide~~ homologue having an amino acid sequence at least 90% identical to that of HIV GAG ~~polypeptide~~ and capable of interacting with Tsg101,

(4) HIV GAGp6 ~~protein~~,

(5) ~~a HIV GAGp6~~ an HIV GAGp6 homologue having an amino acid sequence at least 90% identical to that of HIV GAGp6 ~~polypeptide~~ and capable of interacting with Tsg101,

(6) ~~a HIV GAGp6~~ an HIV GAGp6 fragment containing an HIV GAGp6 late domain motif and capable of interacting with Tsg101, and

(7) a fusion protein containing said HIV GAG ~~polypeptide~~, said HIV GAG ~~polypeptide~~ fragment, said HIV GAG ~~polypeptide~~ homologue, said HIV GAGp6 ~~protein~~, said HIV GAGp6 homologue or said HIV GAGp6 fragment[[.]];

wherein said first and second proteins interact to form said isolated protein complex.

Claim 9 (original): The isolated protein complex of Claim 8, wherein said HIV GAGp6 fragment contains an amino acid sequence of SEQ ID NO:25 or SEQ ID NO:26.

Claim 10 (original): The isolated protein complex of Claim 8, wherein said HIV GAGp6 fragment contains an amino acid sequence of SEQ ID NO:31 or SEQ ID NO:32.

Claim 11 (original): The isolated protein complex of Claim 8, wherein said HIV GAGp6 fragment has a contiguous span of at least 10 amino acid residues of a naturally occurring HIV GAGp6, said contiguous span containing a P(T/S)AP late domain motif.

Claim 12 (currently amended): An isolated protein complex ~~comprising~~ comprising:

a first protein which is Tsg101 or a Tsg101 ~~fragment~~ fragment, or a homologue thereof having an amino acid sequence that is at least 50% identical to that of Tsg101 or said Tsg101 fragment, wherein said Tsg101 fragment and said homologue are capable of interacting with HIV Gagp6 late domain; and

~~interacting with~~ a second protein which is a retrovirus GAG ~~polypeptide~~ or a retrovirus GAG ~~polypeptide~~ fragment containing the P(T/S)AP late domain ~~motif~~ motif, or a homologue thereof containing the P(T/S)AP late domain motif and having an amino acid sequence that is at least 50% identical to that of said retrovirus GAG ~~polypeptide~~ or said retrovirus GAG ~~polypeptide~~ fragment, wherein said first and second proteins interact to form said isolated protein complex.

Claim 13 (original): The isolated protein complex of Claim 12, wherein said retrovirus is a lentivirus.

Claim 14 (original): The isolated protein complex of Claim 13, wherein said lentivirus is a primate lentivirus.

Claim 15 (original): The isolated protein complex of Claim 14, wherein said primate lentivirus is selected from the group consisting of HIV-1, HIV-2, HIV-3, and simian immunodeficiency viruses.

Claim 16 (original): The isolated protein complex of Claim 13, wherein said lentivirus is a non-primate lentivirus selected from the group consisting of bovine lentiviruses, feline lentiviruses, and ovine/caprine lentiviruses.

Claim 17 (currently amended): An isolated protein complex comprising:

(a) a first protein which is selected from the group consisting of

(i) Tsg101 ~~protein~~,

(ii) a Tsg101 ~~protein~~ homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6 late domain,

(iii) a Tsg101 ~~protein~~ fragment containing the Tsg101 UEV domain and capable of interacting with HIV GAGp6 late domain, and

(iv) a fusion protein containing said Tsg101 ~~protein~~, said Tsg101 ~~protein~~ homologue or said Tsg101 ~~protein~~ fragment; and

(b) a second protein which is selected from the group consisting of

(1) a retrovirus GAG ~~polypeptide~~ having the P(T/S)AP late domain motif,

(2) a homologue of said retrovirus GAG ~~polypeptide~~, said homologue having an amino acid sequence at least 90% identical to that of said retrovirus GAG ~~polypeptide~~ and capable of interacting with Tsg101,

(3) a fragment of said retrovirus GAG ~~polypeptide~~, said fragment containing an HIV GAGp6 late domain motif and being capable of interacting with Tsg101, and

(4) a fusion protein containing said retrovirus GAG ~~polypeptide~~, said retrovirus GAG ~~polypeptide~~ homologue or said retrovirus GAG ~~polypeptide~~ fragment[[.]];

wherein said first and second proteins interact to form said isolated protein complex.

Claim 18 (original): The isolated protein complex of Claim 17, wherein said retrovirus is a lentivirus.

Claim 19 (original): The isolated protein complex of Claim 18, wherein said lentivirus is a primate lentivirus.

Claim 20 (original): The isolated protein complex of Claim 19, wherein said primate lentivirus is selected from the group consisting of HIV-1, HIV-2, HIV-3, and simian immunodeficiency viruses.

Claim 21 (currently amended): The isolated protein complex of ~~Claim 19~~ Claim 18, wherein said lentivirus is a non-primate lentivirus selected from the group consisting of bovine lentiviruses, feline lentiviruses, and ovine/caprine lentiviruses.

Claim 22 (currently amended): An isolated protein complex comprising:

(a) a first protein which is selected from the group consisting of

(i) Tsg101 ~~protein~~,

(ii) a Tsg101 ~~protein~~ homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6 late domain,

(iii) a Tsg101 ~~protein~~ fragment containing the Tsg101 UEV domain and capable of interacting with an HIV GAGp6 late domain, and

(iv) a fusion protein containing said Tsg101 ~~protein~~, said Tsg101 ~~protein~~ homologue or said Tsg101 ~~protein~~ fragment; and

(b) a second protein which is selected from the group consisting of

(1) a primate lentivirus GAG polypeptide,

(2) a primate lentivirus GAG ~~polypeptide~~ homologue having an amino acid sequence at least 90% identical to that of said primate lentivirus GAG ~~polypeptide~~ and capable of interacting with Tsg101,

(3) a primate lentivirus GAGp6 protein,

(4) a primate lentivirus GAGp6 homologue having an amino acid sequence at least 90% identical to that of HIV GAGp6 ~~polypeptide~~ and capable of interacting with Tsg101,

(5) a primate lentivirus GAGp6 fragment containing an HIV GAGp6 late domain motif and capable of interacting with Tsg101, and

(6) a fusion protein containing said primate lentivirus GAG ~~polypeptide~~, said primate lentivirus GAG ~~polypeptide~~ homologue, said primate lentivirus GAGp6 protein, said primate lentivirus GAGp6 homologue or said primate lentivirus GAGp6 fragment[[.]];

wherein said first and second proteins interact to form said isolated protein complex.

Claim 23 (currently amended): An isolated protein complex comprising:

a first fusion protein having a Tsg101 ~~protein~~ fragment capable of interacting with HIV GAGp6 late domain interacting with a second fusion protein containing a fragment of HIV GAG containing an HIV GAGp6 late domain motif ~~polypeptide~~.

Claim 24 (withdrawn): A method for making the protein complex of Claim 1, comprising the steps of:

providing said first protein and said second protein; and

contacting said first protein with said second protein.

Claim 25 (withdrawn): A protein microarray comprising the protein complex according to Claim 1.

Claim 26 (currently amended): ~~A protein~~ An isolated protein complex having a first polypeptide covalently linked to a second polypeptide, wherein said first polypeptide is Tsg101 or a homologue or fragment thereof capable of interacting with HIV GAG p6 late domain, and wherein said second polypeptide is HIV GAG or a homologue or fragment thereof[[.]] containing an HIV GAGp6 late domain; and

wherein said first and second polypeptides interact to form said isolated protein complex.

Claim 27 (withdrawn): An isolated nucleic acid encoding the fusion protein of Claim 26.

Claim 28 (withdrawn): A method for selecting modulators of a protein complex according to Claim 8, comprising:

providing the protein complex;

contacting said protein complex with a test compound; and

determining the presence or absence of binding of said test compound to said protein complex.

Claim 29 (withdrawn): A method for selecting modulators of an interaction between a first protein and a second protein,

(a) said first protein being selected from group consisting of

(i) Tsg101 protein,

(ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6,

(iii) a Tsg101 protein fragment containing the Tsg101 UEV domain, and

(iv) a fusion protein containing said Tsg101 protein, said Tsg101 protein homologue or said Tsg101 protein fragment; and

(b) said second protein being selected from the group consisting of

(1) HIV GAG polypeptide,

(2) a HIV GAG polypeptide homologue having an amino acid sequence at least 90% identical to that of HIV GAG polypeptide and capable of interacting with Tsg101,

(3) HIV GAGp6 protein,

(4) a HIV GAGp6 homologue having an amino acid sequence at least 90% identical to that of HIV GAGp6 polypeptide and capable of interacting with Tsg101,

(5) a HIV GAGp6 fragment capable of interacting with Tsg101, and

(6) a fusion protein containing said HIV GAG polypeptide, said HIV GAG polypeptide homologue, said HIV GAGp6 protein, said HIV GAGp6 homologue or said HIV GAGp6 fragment, said method comprising:

contacting said first protein with said second protein in the presence of one or more test compounds; and

determining the interaction between said first protein and said second protein.

Claim 30 (withdrawn): The method of Claim 29, wherein at least one of said first and second proteins is a fusion protein having a detectable tag.

Claim 31 (withdrawn): The method of Claim 29, wherein said contacting step is conducted in a substantially cell free environment.

Claim 32 (withdrawn): The method of Claim 29, wherein said contacting step is conducted in a host cell.

Claim 33 (withdrawn): The method of Claim 32, wherein said host cell is a yeast cell.

Claim 34 (withdrawn): A method for selecting modulators of an interaction between a first protein and a second protein,

(a) said first protein being selected from group consisting of

(i) Tsg101 protein,

(ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6,

(iii) a Tsg101 protein fragment containing the Tsg101 UEV domain, and

(iv) a fusion protein containing said Tsg101 protein, said Tsg101 protein homologue or said Tsg101 protein fragment; and

(b) said second protein being selected from the group consisting of

(1) a retrovirus GAG polypeptide having the P(T/S)AP late domain motif,

(2) a homologue of said retrovirus GAG polypeptide, said homologue having an amino acid sequence at least 90% identical to that of said retrovirus GAG polypeptide and capable of interacting with Tsg101,

(3) a fragment of said retrovirus GAG polypeptide, said fragment being capable of interacting with Tsg101, and

(4) a fusion protein containing said retrovirus GAG polypeptide, said retrovirus GAG polypeptide homologue or said retrovirus GAG polypeptide fragment, said method comprising:

contacting said first protein with said second protein in the presence of one or more test compounds; and

determining the interaction between said first protein and said second protein.

Claim 35 (withdrawn): The method of Claim 34, wherein said contacting step is conducted in a substantially cell free environment.

Claim 36 (withdrawn): The method of Claim 34, wherein said contacting step is conducted in a host cell.

Claim 37 (withdrawn): A method for selecting modulators of the protein complex of Claim 8, comprising:

contacting said protein complex with a test compound; and

determining the interaction between said first protein and said second protein.

Claim 38 (withdrawn): A method for selecting modulators of the protein complex of Claim 17, comprising:

contacting said protein complex with a test compound; and

determining the interaction between said first protein and said second protein.

Claim 39 (withdrawn): A method for selecting modulators of the protein complex of Claim 22, comprising:

contacting said protein complex with a test compound; and

determining the interaction between said first protein and said second protein.

Claim 40 (withdrawn): A method for selecting modulators of an interaction between a first polypeptide and a second polypeptide,

(a) said first polypeptide being selected from group consisting of

(i) Tsg101 protein,

(ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6 late domain, and

(iii) a Tsg101 protein fragment containing the Tsg101 UEV domain; and

(b) said second polypeptide being selected from the group consisting of

(1) HIV GAG polypeptide,

(2) a HIV GAG polypeptide homologue having an amino acid sequence at least 90% identical to that of HIV GAG polypeptide and capable of interacting with Tsg101,

(3) HIV GAGp6 protein,

(4) a HIV GAGp6 homologue having an amino acid sequence at least 90% identical to that of HIV GAGp6 polypeptide and capable of interacting with Tsg101, and

(5) a HIV GAGp6 fragment capable of interacting with Tsg101, said method comprising:

providing in a host cell a first fusion protein having said first polypeptide, and a second fusion protein having said second polypeptide, wherein a DNA binding domain is fused to one of said first and second polypeptides while a transcription-activating domain is fused to the other of said first and second polypeptides;

providing in said host cell a reporter gene, wherein the transcription of the reporter gene is determined by the interaction between the first polypeptide and the second polypeptide;

allowing said first and second fusion proteins to interact with each other within said host cell in the presence of a test compound; and

determining the presence or absence of expression of said reporter gene.

Claim 41 (withdrawn): The method of Claim 40, wherein said host cell is a yeast cell.

Claim 42 (withdrawn): A method for selecting modulators of the protein complex of Claim 17, comprising:

providing in a host cell a first fusion protein containing said first protein, and a second fusion protein containing said second protein, wherein a DNA binding domain is

fused to one of said first and second polypeptides while a transcription-activating domain is fused to the other of said first and second proteins;

providing in said host cell a reporter gene, wherein the transcription of the reporter gene is determined by the interaction between the first protein and the second protein;

allowing said first and second fusion proteins to interact with each other within said host cell in the presence of a test compound; and

determining the presence or absence of expression of said reporter gene.

Claim 43 (withdrawn): A method for selecting modulators of the protein complex of Claim 22, comprising:

providing in a host cell a first fusion protein containing said first protein, and a second fusion protein containing said second protein, wherein a DNA binding domain is fused to one of said first and second polypeptides while a transcription-activating domain is fused to the other of said first and second proteins;

providing in said host cell a reporter gene, wherein the transcription of the reporter gene is determined by the interaction between the first protein and the second protein;

allowing said first and second fusion proteins to interact with each other within said host cell in the presence of a test compound; and

determining the presence or absence of expression of said reporter gene.

Claim 44 (currently amended): A composition comprising:

(a) a first expression vector having a nucleic acid encoding a first protein which is selected from the group consisting of

(i) Tsg101 ~~protein~~,

(ii) a Tsg101 ~~protein~~ homologue having an amino acid sequence at least [[90%]] 50% identical to that of Tsg101 and capable of interacting with HIV GAGp6 late domain,

(iii) a Tsg101 ~~protein~~ fragment containing the Tsg101 UEV domain and capable of interacting with HIV GAGp6 late domain, [[and]]

(iv) a homologue of said Tsg101 fragment having an amino acid sequence at least 50% identical to that of said Tsg101 fragment, and capable of interacting with HIV GAGp6 late domain, and

(v) a fusion protein containing said Tsg101 ~~protein~~, said Tsg101 ~~protein~~ homologue or said Tsg101 ~~protein~~ fragment, or said homologue of said Tsg101 fragment; and

(b) a second expression vector having a nucleic acid encoding a second protein selected from the group consisting of

(1) HIV GAG ~~polypeptide~~,

(2) ~~a HIV GAG polypeptide~~ an HIV GAG homologue having an amino acid sequence at least [[90%]] 50% identical to that of HIV GAG ~~polypeptide~~ and capable of interacting with Tsg101,

(3) HIV GAGp6 ~~protein~~,

(4) ~~a HIV GAGp6~~ an HIV GAGp6 homologue having an amino acid sequence at least [[90%]] 50% identical to that of HIV GAGp6 ~~polypeptide~~ and capable of interacting with Tsg101,

(5) ~~a HIV GAGp6~~ an HIV GAGp6 fragment containing an HIV GAGp6 late domain motif and capable of interacting with Tsg101, [[and]]

(6) a homologue of said HIV GAGp6 fragment having an amino acid sequence at least 50% identical to that of HIV GAGp6 fragment, containing an HIV GAGp6 late domain motif and capable of interacting with Tsg101, and

(7) a fusion protein containing said HIV GAG ~~polypeptide~~, said HIV GAG ~~polypeptide~~ homologue, said HIV GAGp6 ~~protein~~, said HIV GAGp6 homologue or said HIV GAGp6 fragment[[.]], or said homologue of said HIV GAGp6 fragment;

wherein said first and second proteins are capable of interacting to form a protein complex.

Claim 45 (currently amended): A host cell comprising:

(a) a first expression vector having a nucleic acid encoding a first protein which is selected from the group consisting of

(i) Tsg101 ~~protein~~,

(ii) a Tsg101 ~~protein~~ homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6 late domain,

(iii) a Tsg101 ~~protein~~ fragment containing the Tsg101 UEV domain and capable of interacting with HIV GAGp6 late domain, [[and]]

(iv) a homologue of said Tsg101 fragment having an amino acid sequence at least 50% identical to that of said Tsg101 fragment, and capable of interacting with HIV GAGp6 late domain, and

(v) a fusion protein containing said Tsg101 ~~protein~~, said Tsg101 ~~protein~~ homologue or said Tsg101 ~~protein~~ fragment, or said homologue of said Tsg101 fragment; and

(b) a second expression vector having a nucleic acid encoding a second protein selected from the group consisting of

(1) HIV GAG ~~polypeptide~~,

(2) ~~a HIV GAG polypeptide~~ an HIV GAG homologue having an amino acid sequence at least 90% identical to that of HIV GAG ~~polypeptide~~ and capable of interacting with Tsg101,

(3) HIV GAGp6 ~~protein~~,

(4) ~~a HIV GAGp6~~ an HIV GAGp6 homologue having an amino acid sequence at least 90% identical to that of HIV GAGp6 ~~polypeptide~~ and capable of interacting with Tsg101,

(5) ~~a HIV GAGp6~~ an HIV GAGp6 fragment containing an HIV GAGp6 late domain motif capable of interacting with Tsg101, [[and]]

(6) a homologue of said HIV GAGp6 fragment having an amino acid sequence at least 50% identical to that of HIV GAGp6 fragment, containing an HIV GAGp6 late domain motif and capable of interacting with Tsg101, and

(7) a fusion protein containing said HIV GAG ~~polypeptide~~, said HIV GAG ~~polypeptide~~ homologue, said HIV GAGp6 ~~protein~~, said HIV GAGp6 homologue or said HIV GAGp6 fragment[[.]], or said homologue of said HIV GAGp6 fragment;

wherein said first and second proteins are capable of interacting to form a protein complex.

Claim 46 (original): The host cell of Claim 45, wherein said host cell is a yeast cell.

Claim 47 (original): The host cell of Claim 45, wherein said first and second proteins are expressed in fusion proteins.

Claim 48 (original): The host cell of Claim 45, wherein one of said first and second nucleic acids is linked to a nucleic acid encoding a DNA binding domain, and the other of said first and second nucleic acids is linked to a nucleic acid encoding a transcription-activation domain, whereby two fusion proteins can be produced in said host cell.

Claim 49 (original): The host cell of Claim 45, further comprising a reporter gene, wherein the expression of the reporter gene is determined by the interaction between the first protein and the second protein.

Claim 50 (currently amended): A host cell comprising:

(a) a first expression vector having a nucleic acid encoding a first protein which is selected from the group consisting of

(i) Tsg101 ~~protein~~,

(ii) a Tsg101 ~~protein~~ homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6 late domain,

(iii) a Tsg101 ~~protein~~ fragment containing the Tsg101 UEV domain and capable of interacting with HIV GAGp6 late domain, and

(iv) a fusion protein containing said Tsg101 ~~protein~~, said Tsg101 ~~protein~~ homologue or said Tsg101 ~~protein~~ fragment; and

(b) a second expression vector having a nucleic acid encoding a second protein selected from the group consisting of

(1) a retrovirus GAG ~~polypeptide~~ having the P(T/S)AP late domain motif and capable of interacting with Tsg101,

(2) a homologue of said retrovirus GAG ~~polypeptide~~, said homologue having an amino acid sequence at least 90% identical to that of said retrovirus GAG ~~polypeptide~~ and capable of interacting with Tsg101,

(3) a fragment of said retrovirus GAG ~~polypeptide~~, said fragment containing an HIV GAGp6 late domain motif and being capable of interacting with Tsg101, and

(4) a fusion protein containing said retrovirus GAG ~~polypeptide~~, said retrovirus GAG ~~polypeptide~~ homologue or said retrovirus GAG ~~polypeptide~~ fragment[[.]];

wherein said first and second proteins interact to form a protein complex.

Claim 51 (withdrawn): A method for providing a compound capable of interfering with an interaction between the first and second proteins in the protein complex of Claim 8 comprising:

providing atomic coordinates defining a three-dimensional structure of said protein complex; and

designing or selecting compounds capable of interfering with the interaction between said first protein and said second protein based on said atomic coordinates.

Claim 52 (withdrawn): A method for providing a compound capable of interfering with an interaction between the first and second proteins in the protein complex of Claim 17 comprising:

providing atomic coordinates defining a three-dimensional structure of said protein complex; and

designing or selecting compounds capable of interfering with the interaction between said first protein and said second protein based on said atomic coordinates.

Claim 53 (withdrawn): A method for providing a compound capable of interfering with an interaction between the first and second proteins in the protein complex of Claim 22 comprising:

providing atomic coordinates defining a three-dimensional structure of said protein complex; and

designing or selecting compounds capable of interfering with the interaction between said first protein and said second protein based on said atomic coordinates.

Claim 54 (withdrawn): A method for selecting a compound capable of inhibiting a protein-protein interaction between Tsg101 and HIV GAGp6, comprising:

contacting a test compound with a protein selected from group consisting of

(i) Tsg101 protein,

(ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6,

(iii) a Tsg101 protein fragment containing the Tsg101 UEV domain, and

(iv) a fusion protein containing said Tsg101 protein, said Tsg101 protein homologue or said Tsg101 protein fragment; and

determining whether said test compound is capable of binding said protein.

Claim 55 (withdrawn): The method of Claim 54, further comprising testing a test compound capable of binding said protein for its ability to interfere with a protein-protein interaction between Tsg101 and HIV GAGp6.

Claim 56 (withdrawn): The method of Claim 55, further comprising testing a test compound capable of binding said protein for its ability to inhibit HIV viral budding from an HIV-infected host cell.

Claim 57 (withdrawn): A method for selecting a compound capable of inhibiting a protein-protein interaction between Tsg101 and HIV GAGp6, comprising:

providing atomic coordinates defining a three-dimensional structure of a protein selected from group consisting of

(i) Tsg101 protein,

(ii) a Tsg101 protein homologue having an amino acid sequence at least 90% identical to that of Tsg101 and capable of interacting with HIV GAGp6,

(iii) a Tsg101 protein fragment containing the Tsg101 UEV domain, and

(iv) a fusion protein containing said Tsg101 protein, said Tsg101 protein homologue or said Tsg101 protein fragment; and

designing or selecting compounds capable of interacting with said protein based on said atomic coordinates.

Claim 58 (withdrawn): The method of Claim 57, further comprising testing a compound capable of interacting with said protein for its ability to interfere with a protein-protein interaction between Tsg101 and HIV GAGp6.

Claim 59 (withdrawn): The method of Claim 57, further comprising testing a test compound capable of interacting with said protein for its ability to inhibit HIV viral budding from an HIV-infected host cell.

Claim 60 (withdrawn): An isolated antibody selectively immunoreactive with a protein complex comprising Tsg101 and HIV GAGp6.

Claim 61 (currently amended): An expression vector comprising:

(a) a first nucleic acid encoding a first protein which is selected from the group consisting of

(i) Tsg101,

(ii) a Tsg101 fragment containing the Tsg101 UEV domain and capable of interacting with HIV GAGp6 late domain,

(iii) a homologue of Tsg101 or said Tsg101 fragment, having an amino acid sequence at least 50% identical to that of Tsg101 or said fragment and capable of interacting with HIV GAGp6 late domain, and

(iv) a fusion protein containing Tsg101, ~~said Tsg101,~~ said Tsg101 fragment, or said homologue of Tsg101 or said Tsg101 fragment; and

(b) a second nucleic acid encoding a second protein selected from the group consisting of

(1) HIV GAG ~~polypeptide~~,

(2) ~~a HIV GAG polypeptide~~ an HIV GAG fragment containing an HIV GAGp6 late domain motif and capable of interacting with Tsg101,

(3) a homologue of HIV GAG ~~polypeptide~~ or said HIV GAG ~~polypeptide~~ fragment, containing an HIV GAGp6 late domain motif and having an amino acid sequence at least 50% identical to HIV GAG ~~polypeptide~~ or said HIV GAG ~~polypeptide~~ fragment and capable of interacting with Tsg101,

(4) HIV GAGp6 ~~polypeptide~~,

(5) ~~a HIV GAGp6 polypeptide~~ an HIV GAGp6 fragment containing an HIV GAGp6 late domain motif and capable of interacting with Tsg101,

(6) a homologue of HIV GAGp6 ~~polypeptide~~ or said HIV GAGp6 ~~polypeptide~~ fragment, having an amino acid sequence at least 50% identical to that of HIV GAGp6 ~~polypeptide~~ or said HIV GAGp6 ~~polypeptide~~ fragment and capable of interacting with Tsg101, and

(7) a fusion protein containing said HIV GAG ~~polypeptide~~, said HIV GAG ~~polypeptide~~ fragment, said ~~HIV GAG polypeptide~~ homologue of HIV GAG or said HIV GAG fragment, said HIV GAGp6 ~~protein~~, said HIV GAGp6 ~~polypeptide~~ fragment, or said ~~HIV GAGp6 polypeptide~~ homologue of HIV GAGp6 or said HIV GAGp6 fragment [[.]];

wherein said first and second proteins are capable of interacting to form a protein complex.

Claim 62 (previously presented): A host cell comprising the expression vector of Claim 61.

Claim 63 (currently amended): A non-human host cell expressing:

(a) a first protein which is selected from the group consisting of

[[((i)]] (i) Tsg101,

(ii) a Tsg101 fragment containing the Tsg101 UEV domain and capable of interacting with HIV GAGp6 late domain,

(iii) a homologue of Tsg101 or said Tsg101 fragment, having an amino acid sequence at least 50% identical to that of Tsg101 or said fragment and capable of interacting with HIV GAGp6 late domain, and

(iv) a fusion protein containing Tsg101, ~~said Tsg101,~~ said Tsg101 fragment, or said homologue of Tsg101 or said Tsg101 fragment; and

(b) ~~a second nucleic acid encoding~~ a second protein selected from the group consisting of

(1) HIV GAG ~~polypeptide~~,

(2) ~~a HIV GAG polypeptide~~ an HIV GAG fragment containing an HIV GAGp6 late domain motif and capable of interacting with Tsg101,

(3) a homologue of HIV GAG ~~polypeptide~~ or said HIV GAG ~~polypeptide~~ fragment, containing an HIV GAGp6 late domain motif, having an amino acid sequence at least 50% identical to HIV GAG ~~polypeptide~~ or said HIV GAG ~~polypeptide~~ fragment and capable of interacting with Tsg101,

(4) HIV GAGp6 ~~polypeptide~~,

(5) ~~a HIV GAGp6 polypeptide~~ an HIV GAGp6 fragment containing an HIV GAGp6 late domain motif and capable of interacting with Tsg101,

(6) a homologue of HIV GAGp6 ~~polypeptide~~ or said HIV GAGp6 ~~polypeptide~~ fragment containing an HIV GAGp6 late domain motif, having an amino acid sequence at least 50% identical to that of HIV GAGp6 ~~polypeptide~~ or said HIV GAGp6 ~~polypeptide~~ fragment and capable of interacting with Tsg101, and

(7) a fusion protein containing said HIV GAG ~~polypeptide~~, said HIV GAG ~~polypeptide~~ fragment, said ~~HIV GAG polypeptide~~ homologue of HIV GAG or said HIV GAG fragment, said HIV GAGp6 protein, said HIV GAGp6 ~~polypeptide~~ fragment, or said ~~HIV GAGp6 polypeptide~~ homologue of HIV GAGp6 or said HIV GAGp6 fragment [[.]];

wherein said first and second proteins are capable of interacting to form a protein complex within said non-human host cell.

Claim 64 (currently amended): An isolated human host cell comprising:

(a) a first promoter operably linked to a first chimeric nucleic acid encoding a first protein selected from the group consisting of

[[((i)]] (i) Tsg101,

(ii) a Tsg101 fragment containing the Tsg101 UEV domain and capable of interacting with HIV GAGp6 late domain,

(iii) a homologue of Tsg101 or said Tsg101 fragment, having an amino acid sequence at least 50% identical to that of Tsg101 or said fragment and capable of interacting with HIV GAGp6 late domain, and

(iv) a fusion protein containing Tsg101, ~~said Tsg101,~~ said Tsg101 fragment, or said homologue of Tsg101 or said Tsg101 fragment; and

(b) a second promoter operably linked to a second chimeric nucleic acid encoding a second protein selected from the group consisting of

(1) HIV GAG ~~polypeptide~~,

(2) ~~a HIV GAG polypeptide~~ an HIV GAG fragment capable of interacting with Tsg101,

(3) a homologue of HIV GAG ~~polypeptide~~ or said HIV GAG ~~polypeptide~~ fragment, containing an HIV GAGp6 late domain motif, having an amino acid sequence at least 50% identical to HIV GAG ~~polypeptide~~ or said HIV GAG ~~polypeptide~~ fragment and capable of interacting with Tsg101,

(4) HIV GAGp6 ~~polypeptide~~,

(5) ~~a HIV GAGp6 polypeptide~~ an HIV GAGp6 fragment containing an HIV GAGp6 late domain motif and capable of interacting with Tsg101,

(6) a homologue of HIV GAGp6 ~~polypeptide~~ or said HIV GAGp6 ~~polypeptide~~ fragment, containing an HIV GAGp6 late domain motif, having an amino acid sequence at least 50% identical to that of HIV GAGp6 ~~polypeptide~~ or said HIV GAGp6 ~~polypeptide~~ fragment and capable of interacting with Tsg101, and

(7) a fusion protein containing said HIV GAG ~~polypeptide~~, said HIV GAG ~~polypeptide~~ fragment, said ~~HIV GAG polypeptide~~ homologue of HIV GAG or said HIV GAG fragment, said HIV GAGp6 ~~protein~~, said HIV GAGp6 ~~polypeptide~~ fragment, or said ~~HIV GAGp6 polypeptide~~ homologue of HIV GAGp6 or said HIV GAGp6 fragment [[.]];

wherein said first and second proteins are capable of interaction to form a protein complex within said isolated human host cell.